Building Community: Stepping Beyond Typical Large Scale Housing Development Models to Create Better Rural Communities

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The Asian Conference on Sustainability, Energy & the Environment 2017
Official Conference Proceedings

Abstract
Community is a vital aspect of living, yet most large scale housing developments tend to focus on achieving maximum occupation rather than creating environments within which communities can grow and thrive. This paper explores the key characteristics of large scale (and post disaster) housing developments in Sri Lanka, and their impact on the culture of rural communities. This paper argues that large scale housing developments should not merely be about providing houses; instead, the focus should also be on the creation of vibrant community environments, and community living spaces. In other words, the paper argues for the significance of spaces in between and around houses, and the effect of these on the wellbeing of people and the progress of the community. The paper identifies several thresholds of 'community living space' based on traditional, cultural and livelihood practices and discusses the architectural opportunities of these and their value and significance in creating better living environments. The paper concludes with comment on the value of placing a far greater focus on community space planning and design, particularly in low cost housing developments in rural Sri Lanka.

Keywords: Reconstruction, Housing, Relocation, Community, Traditional, Rural

Introduction

Housing projects cater to the needs of various sectors of society and are constructed for diverse reasons. Hence they have to satisfy the equally diverse needs of all their stakeholders, including providers and residents. The construction of low cost housing after a wide scale disaster, such as the 2004 Tsunami, are predominantly aimed at providing homes for destroyed communities within a short span of time, with the ultimate intention of life returning to a level of normalcy similar to pre-disaster states. However these projects are also seen, especially by governments, as an opportunity for intervention in the economic development of these disaster affected regions so as to transform them rapidly from a rural to an industrialised economy (Oliver, 1992; Barakat, 2003). Commenting on the negative outcomes such government attitudes generate in post disaster situations Paul Oliver, states, 'the notion of 'development' as a process of transition from a predominantly peasant economy to an industrialised one is of relatively recent date' (Oliver, 1992). The sustainability and suitability of such developments for the needs of homeowners and communities are most often assumed and the industrialisation and development aimed for (Oliver-Smith, 1992), at least in the first instance, is the priority. Oliver observed the negative implications of government interventions on rural communities in the 1970s and 80s. Four and a half decades later government approaches to reconstruction have not changed and continue to force the rapid transformation of rural regions, traditional communities and vernacular living environments in the aftermath of disasters, into new and unrecognisable places. While it is understandable and justifiable that the underlying aim of governments is the economic improvement of poor communities, the processes utilised to achieve these aims fail to yield the desired outcomes in both the short and long term. The predominant reason for this is the lack of understanding of contextual opportunities and cultural practices that support livelihoods and sustain these communities.

Post disaster developments concentrate on one aspect—rehousing as many people as possible in a short time. These interventions are often implemented by organisations with little or no prior experience in such work and with little or no contribution from future homeowners. As a result they rarely respond to the socio-cultural needs and environmental aspects of rural communities, hence failure is inevitable. Oliver (1992) believed these interventions are 'predicated on the belief that the victims of a disaster should be provided with housing as they may be provided with medicines, blankets or food' (p.15) and that 'housing is largely based on the concept of the dwelling as a consumer product and marketable commodity; the separation of owner and builder is assumed' (p.15). The large body of literature that has emerged over the last decade from disciplines such as Psychology, Environment and Behaviour, Geography and Livelihood Studies, Landscape and Ecological Engineering highlight the shortcomings of these developments and the psychological, physical, economic and social impacts on traditional and rural communities. When combined with the issue of the infrastructure needed to support new developments and sustain communities rarely materialising these developments are akin to a second wave of disasters.

The aim of housing developments in Sri Lanka after the 2004 Asian Tsunami was to provide basic homes to entire communities by relocating them inland and away from traditional coastal environments, now considered unsafe. Following the extensive destruction of life and property caused by the 2004 Tsunami in Sri Lanka, over 500 donor organisations pledged to assist by rebuilding the near 70,000 homes (Tittawella, 2005; World Bank Report, 2009) estimated to have been damaged or destroyed. Most of these donor organisations and the architects and planners they worked with had little or no previous association with the communities they were rebuilding, or any prior experience in community housing or rural development in Sri Lanka or elsewhere (Shaw, 2011).

Efficiency is the usual driver of development projects whether funded by governments, donor organisations or the corporate sector, for time and resources are costly and these organisations have other agendas to deal with. As a result, generic housing typologies and community layouts designed for ease of construction in early post WWII western suburbs are privileged and transplanted with no consideration for contextual uniqueness or the sustainability of communities. Most post Tsunami housing in Sri Lanka was based on these unsuitable and outdated models. Observing this situation Fabry, founder of Sri Lanka Solidarity working for the economic development of poor communities, states 'It should not be a matter of just putting people into houses in empty paddocks but of thinking how these communities might be operating in 10 or 20 years time' (Shaw, 2011, p.8).

The Study

This paper is one outcome of a study carried out over several visits to Tsunami affected communities in southeast Sri Lanka between 2005 and 2008. The initial study was conducted a year after the 2004 Asian Tsunami. Visits were made to several displaced communities housed in temporary shelters while their new housing was being constructed.

Informal interviews, casual meetings with various community members and observations enabled a view of these disaster affected communities from a perspective not normally available. This data was all recorded for later consideration. Displaced from their usual living environments, with their homes, families, communities and livelihoods destroyed by an unimagined natural disaster of immense magnitude, these people were at their most vulnerable. However they were a humble, warm, generous and welcoming people, eager to begin rebuilding their lives, livelihoods and communities and determined to put the disaster behind them and resume a normal life. In this sense they were an incredibly resilient people.

The same communities eight months to one year later had moved to their new houses and were coming to terms with their new living environments and starting to take ownership. Relocated 700m to 5km from original sea front living and livelihood environments, the communities were completely new in terms of their layout, house types and materiality. Six months into occupation of the new living environments obvious adaptations and changes to the new housing were evident as was the change

in the attitudes of community members. It was clear that what had been constructed for these people, mostly with little or no input from community members, was inadequate, lacking in fundamental infrastructure and not aligned with their basic needs or the contextual conditions.

As I wandered through the communities observing the changes, adaptations and additions to the new housing I was also able to observe the community in their daily activities, interacting with each other and the new living environment, and the changes they had made to it. This research is the outcome of my attempts to understand the changes and identify what was driving these. As I began to understand the relevance of the changes and the difficulties communities were facing in new developments the question 'how do we overcome the disconnect between research published on the significant damage post disaster developments cause to communities, and the governments, donor organisations, community planners, and architects who continue to implement outdated and unsuitable developments?'
The aim of both the study and this paper is to open up a discourse on how we might change current attitudes and approaches to reconstruction and focus on rebuilding the lives of disaster affected rural communities, and facilitate this through informed creative spatial planning and design methods to achieve:

a. living environments that are appropriate to rural economies and traditional livelihood practices

b. living environments that support community engagement and capture the unique qualities of traditional and rural living

c. housing solutions sensitive to the contextual conditions, needs and livelihoods of traditional and rural communities

d. housing solutions that are easily adaptable by community members and utilise vernacular materials and traditional methods familiar to them

This paper evolves through a series of discussions. It begins by identifying the common characteristics of housing developments in emerging nations like Sri Lanka following a large scale disaster. This is concluded by identifying the effect of these developments on the lifestyles and needs of traditional rural communities. Thereafter the discussion focuses on understanding the traditional, and now destroyed, living environments of rural coastal fisher communities and highlights the spatial qualities that once supported the basic living and livelihood needs of these fisher communities and the factors that shaped them. The aim of the paper is to highlight the differences between the housing provided to these communities after the Tsunami and the living environments that were familiar to the coastal fishers.

Common characteristics of Post Disaster Developments

Common characteristics of large scale post disaster community developments at the neighbourhood scale are set out in table 1 with a commentary on their key characteristics and implications for traditional and rural communities. Table 2 looks at the housing built after a disaster in a similar manner.

Table 1: Common Characteristics of Post Tsunami Housing Developments

Characteristic	Commentary
Relocation	Forced relocation out of traditional living environments, food & livelihood sources to safer & new environments. Disruptive of traditional family, community & livelihood structures. No consideration for future sources of income and long term sustainability. Insufficient resources, poor or unsuitable infrastructure, transportation issues, increased cost of living
Gridiron layouts	Layouts impose uniformity, orderliness, control, surveillance & tidy appearances. Equalising and flattening of community hierarchies, cultural structures & diversity. Ease of subdivision & allocation of land, Ease of planning, construction and supply of services
Privileging the Street	Community layouts controlled by streets, not necessarily in response to vehicular access needs of the community (bicycles, tuk tuks, motorbikes, van) but to generic urban planning models.
Privileging of Services	For ease of constructing services (water, power etc) privileged over organic layouts of traditional & rural communities
Community Space	Located in central communal areas and catering for the larger community. Lack of small spaces for clusters of community. Ensures economy of land use & ease of planning but fails to provide a sense of security and vigilance, particularly for the safety of children.
Contextual Uniqueness	Site cleared completely and flattened where possible with only a few distinguishing factors left, such as larger trees, if any: site identity/character lost/deleted. Provides ease of planning and construction.
Boundaries	Extensive boundaries between homes and between homes & community spaces

Table 2. Common Characteristics of Post Tsunami Houses

Characteristic	Commentary
Generic House	2-4 house types with minor variations & 4 room house model consisting of kitchen, living, 2 bedrooms + outhouse or externally accessed toilet & shower.
Orientation	House orientation informed by gridiron street layouts with houses facing streets, this affects cooling, protection from monsoons, cultural beliefs & practices.
Low Cost Construction	Use of labour intense methods and systems. Unsuitable & poor quality materials with high transportation costs as not locally produced. Unskilled labour. Material & construction not always quality assured. Testing ground for new construction methods and imported materials
Detail	Poor consideration for details, missing elements that mitigate contextual environmental factors such as pitched roofs, wide eaves, deep verandas, and balconies for shade from rain and sun & suitable penetrations for cross ventilation & increased air flow for natural cooling & privacy. Raised floors in flood prone sites
Materials	Construction materials unsuitable for contextual conditions, not locally available and unfamiliar to local builder and homeowners, making repair & adaptation difficult & costly
Living Space	Missing key living spaces such as verandas (relevance discussed in Table 4), kitchens suited to traditional food preparation methods, storage suited to livelihoods & bathrooms & toilets suited to local culture.
Adaptability & flexibility	Roof forms, house layouts, construction methods either do not allow or limit opportunity for expansion or additions.

Common shortcomings that contribute to the issues outlined in the above tables may be identified in the typical approaches taken by governments and donor organisations in a post disaster situation. Top-down planning approaches, directed and driven by those with little or no prior understanding of these communities and often unable to distinguish one village from another, seriously undermine the highly complex systems of living and contextual uniqueness that define rural communities. The lack of understanding and appreciation of the difference between urban and rural planning is another factor that underlying unsuitable rebuilding processes and unsustainable developments. Rural communities function differently to urban communities and do not have the same levels of income, population density, resource consumption and

infrastructure requirements. Planning guidelines and design requirements for rural environments must reflect these differences and respond to the uniqueness and future potential of these environments. Not heeding research into these post disaster communities and isolating them from the detailed planning and construction processes are identifiably the biggest contributors to unsuitable developments and the key shortcomings needing to be addressed.

Table 3: Implications and Impact of Housing on Traditional & Rural Communities

Implication	Impact
Identity	Generic identity: nonspecific to community, place, livelihoods, contributing to a sense of lack of identity or loss of identity
Uniformity	Equalising or flattening of hierarchies, negating the diversity and uniqueness that inform community, and contributing to a sense of loss of identity and displacement
Newness	Unresponsive to community dynamics and space needs: isolating and unsupportive environments threaten sense of community and family, lack of in-between semi-public communal space, safety of children compromised, opportunity for strengthening family and livelihood networks lost
Space	Inadequate spatial allocation: vastness of development, wide streets, large subdivisions, spread out communities contribute to isolation, lack of security, loss of sense of safety, loneliness, travel & transport issues, services and access to resources & facilities. Inadequate space: contributing to lack of privacy, inability to carry out daily & livelihood activities and support extended family, contributes to health & hygiene issues
Place	Relocation: forced removal contributes to loss of identity relative place of significant meaning to community and individual members. Displacement and loss of control of traditional hierarchies, livelihood networks, sources and locations, loss of income, threatens community sustenance & sustainability
Privacy	Differing notions of privacy and security: community is unfamiliar with these. This can be isolating, inadequate or inappropriate.

While the long term physical, psychological and economic impacts of post tsunami housing projects on Sri Lanka's traditional and rural communities is yet to be studied

similar studies have been carried out in rural environments of developed nations, following relocation and rebuilding processes after major disasters (Quarantelli, 1985a, 1985b; Brown, 1992; Riad, 1996). These studies provide valuable insight into the approaches to post disaster situations across developed nations and the consequences of these on communities and individuals. When compared to the processes in emerging nations there is little difference; relocation, unsuitable housing, lack of understanding of local cultures and livelihood needs also dominate these projects. Forced relocation is identified as particularly disruptive and psychologically stressful across diverse contexts and cultures (Oliver-Smith, 1992). This is further aggravated by unsuitable housing and the breakdown of family networks and community structures (Quarantelli, 1985a, 1985b). In addition the complex relationship between place and livelihoods when disrupted through relocation is rarely recovered (King, 2011). This is a major finding as it highlights the impact on the economic wellbeing of the family and community and in particular the psychological wellbeing of the family breadwinner, usually the dominant male (Quarantelli, 1985a, 1985b). The negative physical, psychological and economic impact of relocation and unsuitable housing on disaster affected communities discussed in these studies highlights the seriousness and caution required when intervening in the reconstruction of housing and development of disaster affected communities (Riad, 1996).

Through these studies we can begin to understand how and why these developments are failing to provide living environments suited to individual and community needs. What appears to be lost through unconsidered reconstruction interventions are the complex spatial relationships that sustain invaluable connections between family, extended family, friends, livelihood networks, livelihood sources and traditional place.

Housing Traditional Communities: Understanding Shortcomings and Inadequacies

When living and livelihoods are closely intertwined, when day to day survival is the prime purpose of life, every little handful nature offers must be embraced, cherished and lived through. Before the 2004 Tsunami destroyed traditional coastal communities in Sri Lanka, they lived predominantly off the land, rivers and sea. These communities were involved in a wide range of livelihood activities related to the fishing industry and were mostly traditional in outlook, technologies and lifestyles.

Traditional communities evolve over time and are established around food sources or livelihood opportunities. With time they may be arranged and structured according to family and livelihood networks, intricate caste structures, caste defined social roles, traditional belief systems, ethnicity, religion, and even historic disputes. Traditional and vernacular homes are most often constructed by the home owners themselves based on family and livelihood needs and in response to contextual conditions. These homes are generally located within close proximity to the main family home, and homes of immediate or extended family members or friends. The building of a new home is a significant occasion for the family and the community. It involves religious

and traditional rituals and its construction is governed by the astrological alignments relative to the new homeowners. Similarly the placement of the house on the site and its orientation are informed by traditional beliefs, including placement of the front door, internal doors, and roof beams. The construction of a home involves the community: family, friends, community members with building experience, women, children and religious and cultural leaders. Getting everything right gives the family great opportunity at lifelong happiness, good health and prosperity. In this sense the home is unique to its owners and is for their lifelong inhabitation and is very much a part of the community that participated and contributed to its manifestation. This concept is at odds with the notion of house as a commodity where the homeowner and the community are isolated from its planning and construction until they are invited to occupy it on completion. While the notion of 'gifting' and 'charitable' endeavour sits well with the donor, it does so with the recipient only for a limited time.
Understanding and respecting the uniqueness and differences of housing needs is essential for identifying suitable and sustainable approaches to assisting communities recover after disaster.

Rural Traditional Living Environments of Sri Lanka's Coastal Fishers

The living environments of the coastal fishers of Sri Lanka can be broadly distributed across several thresholds, each catering for specific functions and needs while blending into the others. It is this collection of thresholds and the collaboration between them that contributes to the fisher's notion of home and community. 'Malu Wadi', the Sri Lankan term for a fisher community, refers to a place where fishers dwell and fish production occurs concurrently (De Sylva, 2008). To the coastal fishers, home and workplace are not two separate entities. The malu wadi' is a community centred on traditional livelihood activities which occur around home and involve family and community (De Sylva, 2008). This relationship is further reinforced by the proximity of home to the livelihood source, the sea, and the point at which income is earned through the bartering of the daily catch, the shore (De Sylva, 2008). Traditionally the malu wadi was a collection of loosely arranged thresholds of open or semi-enclosed space for various community and livelihood activities, surrounded haphazardly by structures for sleeping, cooking, and storage constructed using vernacular materials such as woven coconut palm leaves (De Sylva, 2008). The basic thresholds of a fisher home align with a number of common spatial terms associated with domestic living and public space, however their functions differ from those the fishers associate with them. The 5 key thresholds of a fisher home are identified and described below in table 4.

Table 4: Fisher Home

Spatial Threshold	Description
House	An indoor space where bedrooms are a private secure interior for the sleeping of women & children & the storage of valuables. Living rooms are semi private often symbolic spaces demonstrative of status & economic prosperity & translate easily to fit family activities & sleeping at night
Step	A semi-private space that corresponds with the primary living spaces of the house where daytime household activities take place such as food preparation, eating, entertaining, socialising, livelihood tasks, siestas, relaxation and sleeping. The step often divides the house from the front & rear garden, the kitchen and toilet from internal rooms and can be semi-enclosed. Veranda, plinth, deck, and courtyard correspond with step
Garden	The semi-private space houses socialising, children's play, livelihood related activities (shop, net repairs, coir production), home gardens, food preparation, drying, cleansing & outhouse
Shore	A semi-public territorial place with boundaries recognisable to the community, for livelihood related community activities, trade, storage (boats, net & equipment), community interaction, social, recreation.
Sea	A semi-public territorial place with boundaries recognisable to the community that support traditional food source & livelihoods, and recreation

Academic literature informed by westernised notions defines house and home as an 'interior space' for household activities circumscribed by the walls that contain it (Sime 1993). A study on home gardens by Jonathan Sime redefines these boundaries and extends them out to include the garden. Sime claims the garden as a psychological space within the territorial bounds of home and stresses its importance to the concept of dwelling. This is one of the few studies that challenge the widespread westernised notions of home as a walled-in interior. This study enables us to begin to appreciate the notion of 'openness' as informing the concept home and to understand the thresholds of openness that inform the fisher's notion of home.

While the 'Step' is a spatial threshold commonly seen in the architecture of most nations, the activities the coastal fishers associate with it as outlined in Table 4 are unique to their requirements, and may vary in form based on cultural and climatic conditions. This vital spatial element of a fisher home when combined with 'House'

and ‘Garden’ inform the family’s identity and basic sense of dwelling. In addition this spatial threshold is easily accepted as what constitutes home by most societies, although it is rarely considered an essential space in low cost housing. To the fishers, however, this is a vital threshold and the concept of home is only satisfied if it is included.

Shore and Sea are the psychological and territorial boundaries that inform the fishers’ world-view and sense of community. The spatial definitions of these two categories correspond with functions related to livelihood activities which involve not just the household but also the community and the wider community, this being essential for supporting livelihood and income. The boundaries of this threshold are recognised and respected across traditional communities; fishers from one community would not fish in the traditional territorial waters of another. This was explained by community members as a way of ensuring not just the prosperity of each community but also the prevention of exploitation through over fishing or use of damaging fishing techniques. The fisher’s concept of dwelling is only satisfied if it includes Shore and Sea. Relocation after the Tsunami impacted negatively on the fishers and their livelihoods, mostly due to the separation from territorial place and inability to monitor territorial waters for both fishing opportunity and violations.

Discussion

As one observes fisher communities in their day to day activities it becomes evident that the thresholds that form their living environments are informed by complex traditional, socio-cultural and livelihood requirements, and are a response to climatic conditions. Notions of privacy, enclosure, spatial activity and sense of ownership differ significantly to common westernised notions. From the studies carried out it can be concluded that the architecture of the fishers is one that extends between land and sea and is defined primarily by openness (De Sylva, 2008). This is a concept that eludes the understanding of most urban dwellers and those that attempt to rebuild these communities after disaster. It is also important to note that what is provided is described as new housing, rather than new homes. ‘Home’ is often defined as possessing greater meaning and significance to the occupant than ‘house’ (Lawrence, 1987; Norberg-Schultz, 1980; Dovey, 1985). A ‘house’ to be considered a ‘home’ must satisfy specific needs particular to individuals and communities, and these needs are informed by culture, occupation and worldviews. The notion of “dwelling” is broadly defined by Lawrence (1987) and Norberg-Schultz (1980), as the link and process that fosters place attachments that enables the experience of house as a home. These studies also suggest that for one’s existence on earth to be meaningful, place attachments that foster a sense of belonging and purpose are essential.

Individuals interviewed at case study sites directly linked their sense of disorientation and lack of motivation for resuming their livelihood activities after resettlement to their displacement from traditional living environments and the new housing. They identified the inadequacy of new housing developments in conveying their status within the community, disrupting vital community relationships, and dislocation from the coastal edge as the cause. In traditional community based livelihood activities, the

role of the individual informs their responsibilities and status within the community and vice versa. For these displaced people the prospect of a new beginning without a past, or even a symbolic representation of it, was an alarming challenge.

Individuals interviewed at a second study site of 150 standardised houses, laid out in a grid, were able to map settlement patterns of occupation based on traditional caste and social hierarchies which were otherwise not discernible to outsiders. Maintaining traditional caste structures and social hierarchy, even after a disaster, appears to have been important to these communities. Social structures no doubt reinforce relative group worth to these communities, and were seen as essential for psychological recovery and for the resumption and continuity of livelihood activities and daily living.

While the brief discussion above enables us to begin to understand the shortcomings of the more widespread westernised understandings of house and home, it also enables us to appreciate the basic needs of traditional and rural communities.

Concluding Discussion

Research outcomes from diverse communities across a range of nations, first world and emerging, all point to the same negative physical, psychological and economic outcomes when communities and families are rehoused in environments that are significantly different to those they are familiar with. The issues related to developing housing for the poor, particularly for traditional rural communities affected by disaster, has been highlighted in over three decades of published research from the architecture discipline, yet the same mistakes continue to be made. Similarly research from a range of disciplines highlights the negative psychological, physical and economic impacts of relocating and rehousing communities on traditional living environments and livelihood locations. Loss of income due to difficulty in recommencing livelihoods, disconnection from place and disruption to vital family and livelihood networks have been identified as the significant long term impacts of relocation, and these are compounded by unsuitable and poor quality housing.

The intricate and complex support networks that exist in traditional rural communities are rarely understood and appreciated for the significant role they play in assisting in recovery processes after a disaster and sustaining communities in the long term. Similarly the relevance of place to traditional communities and livelihoods, for the same benefits they offer, has not been understood. The short-sighted and ignorant attitude and approach to housing of rural and traditional communities is led by the view that urban development principals can be applied to rural communities. The lack of awareness and understanding of how rural communities are structured and how livelihood practices differ from urban livelihoods continues to afflict post disaster planning. This situation must change if housing is to continue to be the driver of reconstruction endeavours.

Interaction and engagement with place and context defines rural and traditional community as do the environmental factors with which the community is familiar and

comfortable. Livelihood activities and choices are informed by the opportunities the wider community, place and environment presents. Traditional communities, even though linked by several obvious similarities, differ from each other. Common factors that act as links are the subtle yet complex community structures, religious beliefs, cultural practices, ethnicities, relationships to place and livelihoods. While these may also act as differences between communities they are highly respected and adhered to by traditional community members. Home based small industries such as fishing, agriculture and manufacture of products for sale and community use are the main sources of income, and these industries are most often place dependent. Living in close proximity to family, extended family, friends and means of livelihood strengthens these communities. As a result these tightly linked communities are resilient as a group and have a higher probability of being self-sustaining. Forced relocation disrupts these attachments and valuable networks and undermines the opportunities of affected communities for fast recovery, while exposing them to future psychological and social vulnerability and economic poverty. As published research has advocated for several decades, relocation should be a last resort in a disaster situation and should be voluntary.

Governments and local councils motivated by political agendas aim at a ‘uniform’ development model across rural environments and advocate for this when funding opportunities for development are presented, particularly after a disaster when external and international funding opportunities are offered freely through donor organisations and international governments in the form of humanitarian aid. Donors with little prior knowledge of the communities and rural environments, and due to time constraints, align themselves with local governments and councils to deliver quickly on their pledges. The common approach to reconstruction of rebuilding houses rather than communities and livelihoods, perhaps driven by the measurability of outputs, is privileged by governments and donors. Re-establishing community ties and livelihoods is shown in the literature as the quickest way to recover after a disaster and the most sustainable, however building housing is privileged. Development after a disaster should focus on facilitating the recovery of the community by supporting the re-establishment of disrupted food sources and livelihoods and identifying ways to increase the resilience of communities.

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